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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,086	11/29/2004	Eiji Kasutani	18463	9654

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EXAMINER	
PATEL, JAYESH A	

ART UNIT	PAPER NUMBER
2624	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/516,086	KASUTANI ET AL.	
	Examiner	Art Unit	
	Jayesh A. Patel	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 May 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) *6-8,11,16- 21* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,9,10,12-15, and 22-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 November 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *03/07 and 11/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The Applicant's Response to the Election/Restriction has been entered and made of record.

2. Claims 1-5,9,10,12-15,22 and 23 will be examined.

3. Claims 6-8,11,16-21 have been cancelled from further prosecution.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.

When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare In re Lowry, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and Warmerdam, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Claim(s) **[9]** is/are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claims **[9]** define a **[a computer readable code]** embodying functional descriptive material. However, the claim does not define a computer-readable medium or memory and is thus non-statutory for that reason (i.e., "When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized" – Guidelines Annex IV). That is, the scope of the presently claimed **[a computer readable code]** can range from paper on which the program is written, to a program simply contemplated and memorized by a person.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3 and 9-10are rejected under 35 U.S.C. 102(b) as being anticipated by Bruckhaus (US 6052492) hereafter Bruckhaus.

4. Regarding Claim 1, Bruckhaus discloses an image description system in **(Figs 1,2 and 3)** comprising: a feature extracting unit **(Element 215 Fig 2)** extracting color layout features from respective of frames of an image sequence at **(Col 4 Lines 35-56 and Col 10 Lines 25-41)**; and a representative feature calculating unit **(Element 230 Fig 2)** calculating a representative color layout feature representative of said image sequence from a group of said layout features of all frames extracted by said feature extracting unit at **(Col 8 Lines 24-41 and Col 10 Lines 25-46)**.

5. Regarding Claim 2, Bruckhaus discloses an image description system **(Figs 1,2 and 3)** comprising: a feature extracting unit at **(Element 215 Fig 2)** extracting color layout features from respective of frames of an image sequence at **(Col 4 Lines 35-56 and Col 10 Lines 25-41)**; a representative feature calculating unit at **(Element 230 Fig 2)** calculating a representative color layout feature representative of said image sequence from a group of said color layout features extracted by said feature extracting unit at **(Col 8 Lines 24-41 and Col 10 Lines 25-46)**; and a representative layout feature storage unit storing said representative color layout feature **(Memory 900 Figure 9)** calculated by said

representative feature calculating unit at **(Col 8 Lines 24-41 and Col 10 Lines 25-46)**.

6. Regarding Claim 3, Bruckhaus discloses an image description system **(Figs 1,2 and 3)** comprising: a feature extracting unit at **(Element 215 Fig 2)** extracting color layout features from respective of frames of an image sequence at **(Col 4 Lines 35-56 and Col 10 Lines 25-41)**; a representative feature calculating unit **(Element 230 Fig 2)** calculating a representative color layout feature representative of said image sequence from a group of said color layout features extracted by said feature extracting unit at **(Col 8 Lines 24-41 and Col 10 Lines 25-46)**; a representative layout feature storage unit storing said representative color layout feature **(Memory 900 Figure 9)** calculated by said representative feature calculating unit; and a layout feature group storage unit storing said group of color layout features **(Memory 900 Figure 9)** calculated by said feature extracting unit at **(Col 4 Lines 35-44 and Lines 53-56)**.

7. Regarding Claim 9, Bruckhaus discloses an image description software product executable on a computer in **(Figures 1 and 2)** comprising: computer readable code configured to cause said computer to extract color layout features from respective of frames of an image sequence; and computer readable code configured to cause said computer to calculate a color layout feature representative of said image sequence from a group of said color layout features

extracted by said feature extracting function at **(Col 3 Lines 24-40 and Col 4 Lines 1-11)**.

8. Regarding Claim 10, Bruckhaus discloses an image description method comprising: extracting color layout features from respective of frames of an image sequence by an **(Element 215 Fig 2);** and calculating a color layout feature representative of said image sequence from a group of said color layout features extracted in said extracting at **(Col 8 Lines 24-41 and Col 10 Lines 25-46)**.

Claims 12-15,22 and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Nagasaka et al. (US 6400890) hereafter Nagasaka.

9. Regarding Claim 12, Nagasaka discloses an image identification system **(Figs 1,2 and Col 4 Lines 57-67 through Col 5 Lines 1-33)** comprising: a representative layout feature storage unit **(Fig 1 Element 9, Col 5 Lines 11-15)** storing a color layout feature representative of an image sequence **(Fig 2 Element 116,118 and 120)** as a representative color layout feature **(Col 9 Lines 37-43)**; a feature extracting unit **(Element 106 Fig 2)** extracting color layout features from respective of frames of a query image sequence; a representative feature calculating unit calculating a representative color layout feature representative of said query image sequence **(Fig 2 element 100 and Col 5**

Lines 1-3) from a group of said color layout features extracted by said feature extracting unit **(Element 106 Fig 2)**; and an image sequence selecting unit selecting a sequence which resembles said query image sequence **(Fig 2 element 100 and Col 5 Lines 1-3)** by comparing **(Fig 2 Element 130)** said representative color layout feature calculated by said representative feature calculating unit with said representative color layout feature stored in said representative layout feature storage unit **(Fig 2 Element 122 and Col 5 Lines 15-19).** The feature comparator **(Fig 2 Element 130)** performs the comparison and the unit 128 retrieves the results.

10. Regarding Claim 13, Nagasaka discloses an image identification system **(Figs 1,2 and Col 4 Lines 57-67 through Col 5 Lines 1-33)** comprising: a representative layout feature storage unit **(Fig 1 Element 9, Col 5 Lines 11-15)** storing a color layout feature representative of an image sequence **(Fig 2 Element 116,118 and 120)** as a representative color **(Col 9 Lines 37-43)** layout feature; a layout feature group **(array of features)** storage unit storing color layout features associated with respective of frames of said image sequence **(Fig 1 Element 9 and Col 5 Line 20)**; a feature extracting unit **(Element 106 Fig 2)** extracting color layout features from respective of frames of a query image sequence **(Fig 2 element 100 and Col 5 Lines 1-3)**; a representative feature calculating unit **(Element 106,110 Fig 2)** calculating a representative color layout feature **(Fig 2 Elements 106,110,112 and 114)** representative of said query

image sequence from a group of said color layout features extracted by said feature extracting unit **(Element 106, Fig 2)**; an image sequence selecting unit selecting an image sequence which resembles said query image sequence **(Fig 2 Element 100 and 102)** by comparing **(Fig 2 Element 130)** said representative color layout feature calculated by said representative feature calculating unit **(Fig 2 Element 122 and Col 5 Lines 15-19)** with said representative color layout feature stored in said representative layout feature storage unit; and an identification unit matching **(Fig 2 Element 130)** said group of color layout features extracted by said feature extracting unit **(Element 122 Fig 2)** against said color layout features stored in said layout feature group storage unit **(Fig 1 Element 9)** as to said image sequence selected by said image sequence selecting unit **(Fig 2 Elements 100,102 and 104)**. Nagasaka also discloses a case where queried images are prepared beforehand **(storage)** and target image is retrieved is used. Nagasaka further discloses where target images are queried images **(Col 8 Lines 54-59)**.

11. Regarding Claim 14, Nagasaka discloses the image description system wherein said representative feature calculating unit calculates average values of respective elements of a color layout feature extracted by said feature extracting unit as a said representative color layout feature in **(Figs 1,2 and Col 9 Lines 37-43)**.

12. Regarding Claim 15, Nagasaka discloses wherein said representative feature calculating unit rearranges values of respective elements of a color layout feature extracted by said feature extracting unit in any of ascending order and descending order, and calculates a median as said representative color layout feature in **(Figs 1,2 and Col 14 Lines20-36)**.

13. Regarding Claim 22, Nagasaka discloses the image identification system according to claim 13. Nagasaka further discloses wherein said representative feature calculating unit calculates average values of respective elements of a color layout feature extracted by said feature extracting unit as said representative color layout feature **(Figs 1,2 and Col 9 Lines 37-43)**.

14. Regarding Claim 23, Nagasaka discloses the image identification system according to claim 13. Nagasaka further discloses wherein said representative feature calculating unit rearranges values of respective elements of a color layout feature extracting unit in any of ascending order or descending order, and calculates a median as said representative color layout feature **(Figs 1,2 and Col 14 Lines20-36)**.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bruckhaus in view of Nagasaka et al. (US 6400890) hereafter Nagasaka.

15. Regarding Claim 4, Bruckhaus discloses the image description system according to claim 1. Bruckhaus however is silent and does not disclose wherein said representative feature calculating unit calculates average values of respective elements of a color layout feature extracted by said feature extracting unit as a said representative color layout feature.

Nagasaka discloses the image description system wherein said representative feature calculating unit calculates average values of respective elements of a color layout feature extracted by said feature extracting unit as a said representative color layout feature in **(Figs 1,2 and Col 9 Lines 37-43)**. Nagasaka discloses the method and apparatus performs a high-speed retrieval of video images by the help of features at **(Col 1 Lines 9-11)**. Both Bruckhaus and Nagasaka are from the same field of endeavor and are analogous art, therefore it would have been obvious for one of ordinary skill in the art at the time the invention was made to have used the teachings of Nagasaka in the system and method of Bruckhaus for the above reasons.

16. Regarding Claim 5, Bruckhaus discloses the image description system according to claim 1. Bruckhaus is silent and however does not disclose wherein said representative feature calculating unit rearranges values of respective elements of a color layout feature extracted by said feature extracting unit in any of ascending order and descending order, and calculates a median as said representative color layout feature.

Nagasaka discloses wherein said representative feature calculating unit rearranges values of respective elements of a color layout feature extracted by said feature extracting unit in any of ascending order and descending order, and calculates a median as said representative color layout feature in **(Figs 1,2 and Col 14 Lines20-36)**.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jayesh A. Patel whose telephone number is 571-270-1227. The examiner can normally be reached on M-F 7.00am to 4.30 pm (5-4-9). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on 571-272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information

for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jayesh Patel
06/08/07
JP

JINGGE WU
SUPERVISORY PATENT EXAMINER